

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/580,989  
Source: IFWP  
Date Processed by STIC: 06/19/2006

# ***ENTERED***



IFWP

## RAW SEQUENCE LISTING

DATE: 06/19/2006

PATENT APPLICATION: US/10/580,989

TIME: 11:18:03

Input Set : A:\082368-008100US.txt

Output Set: N:\CRF4\06192006\J580989.raw

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4 <110> APPLICANT: Ono, Yuichi
5     Nakagawa, Yasuko
6     Nakatani, Tomoya
8 <120> TITLE OF INVENTION: SPECIFIC MARKER Lmx1a ON DOPAMINERGIC NEURONS
10 <130> FILE REFERENCE: 082368-008100US
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/580,989
C--> 12 <141> CURRENT FILING DATE: 2006-05-25
12 <150> PRIOR APPLICATION NUMBER: PCT/JP2004/017574
13 <151> PRIOR FILING DATE: 2004-11-26
15 <150> PRIOR APPLICATION NUMBER: JP 2003-395493
16 <151> PRIOR FILING DATE: 2003-11-26
18 <160> NUMBER OF SEQ ID NOS: 46
20 <170> SOFTWARE: FastSEQ for Windows Version 4.0
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 26
24 <212> TYPE: DNA
25 <213> ORGANISM: Artificial Sequence
27 <220> FEATURE:
28 <223> OTHER INFORMATION: adapter for cDNA amplification
30 <400> SEQUENCE: 1
31 cagctccaca acctacatca ttccgt                                26
33 <210> SEQ ID NO: 2
34 <211> LENGTH: 12
35 <212> TYPE: DNA
36 <213> ORGANISM: Artificial Sequence
38 <220> FEATURE:
39 <223> OTHER INFORMATION: adapter for cDNA amplification
41 <400> SEQUENCE: 2
42 acggaatgat gt                                                12
44 <210> SEQ ID NO: 3
45 <211> LENGTH: 26
46 <212> TYPE: DNA
47 <213> ORGANISM: Artificial Sequence
49 <220> FEATURE:
50 <223> OTHER INFORMATION: adapter for cDNA amplification
52 <400> SEQUENCE: 3
53 gtccatcttc tctctgagac tctggt                                26
55 <210> SEQ ID NO: 4
56 <211> LENGTH: 12
57 <212> TYPE: DNA
58 <213> ORGANISM: Artificial Sequence
60 <220> FEATURE:
61 <223> OTHER INFORMATION: adapter for cDNA amplification

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63 <400> SEQUENCE: 4
64 accagagtct ca 12
66 <210> SEQ ID NO: 5
67 <211> LENGTH: 26
68 <212> TYPE: DNA
69 <213> ORGANISM: Artificial Sequence
71 <220> FEATURE:
72 <223> OTHER INFORMATION: adapter for cDNA amplification
74 <400> SEQUENCE: 5
75 ctgatgggtg tcttctgtga gtgtgt 26
77 <210> SEQ ID NO: 6
78 <211> LENGTH: 12
79 <212> TYPE: DNA
80 <213> ORGANISM: Artificial Sequence
82 <220> FEATURE:
83 <223> OTHER INFORMATION: adapter for cDNA amplification
85 <400> SEQUENCE: 6
86 acacactcac ag 12
88 <210> SEQ ID NO: 7
89 <211> LENGTH: 26
90 <212> TYPE: DNA
91 <213> ORGANISM: Artificial Sequence
93 <220> FEATURE:
94 <223> OTHER INFORMATION: adapter for cDNA amplification
96 <400> SEQUENCE: 7
97 ccagcatcga gaatcagtgt gacagt 26
99 <210> SEQ ID NO: 8
100 <211> LENGTH: 12
101 <212> TYPE: DNA
102 <213> ORGANISM: Artificial Sequence
104 <220> FEATURE:
105 <223> OTHER INFORMATION: adapter for cDNA amplification
107 <400> SEQUENCE: 8
108 actgtcacac tg 12
110 <210> SEQ ID NO: 9
111 <211> LENGTH: 26
112 <212> TYPE: DNA
113 <213> ORGANISM: Artificial Sequence
115 <220> FEATURE:
116 <223> OTHER INFORMATION: adapter for cDNA amplification
118 <400> SEQUENCE: 9
119 gtcgatgaac ttcgactgtc gatcgt 26
121 <210> SEQ ID NO: 10
122 <211> LENGTH: 12
123 <212> TYPE: DNA
124 <213> ORGANISM: Artificial Sequence
126 <220> FEATURE:
127 <223> OTHER INFORMATION: adapter for cDNA amplification
129 <400> SEQUENCE: 10

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130 acgatcgaca gt                                     12
132 <210> SEQ ID NO: 11
133 <211> LENGTH: 26
134 <212> TYPE: DNA
135 <213> ORGANISM: Artificial Sequence
138 <220> FEATURE:
139 <223> OTHER INFORMATION: primer for cDNA amplification
141 <400> SEQUENCE: 11
142 tgaagaaagt ctctgcaagt cagccc                     26
144 <210> SEQ ID NO: 12
145 <211> LENGTH: 26
146 <212> TYPE: DNA
147 <213> ORGANISM: Artificial Sequence
149 <220> FEATURE:
150 <223> OTHER INFORMATION: primer for cDNA amplification
152 <400> SEQUENCE: 12
153 caccaccgtt tgtctgagca gagctc                     26
155 <210> SEQ ID NO: 13
156 <211> LENGTH: 3338
157 <212> TYPE: DNA
158 <213> ORGANISM: Mus musculus
160 <400> SEQUENCE: 13
161 gagagccgtc gcgagcagtt cacgggggct cttctctctc ctcccacett acatttcctt 60
162 tgtctggact ctaccctcta ggctcattct tgtcgccctg gacactgctt ctgtcctgtc 120
163 ccaggagagt ggcaactgag ggtgcggagt cccaacaggc acgggaagct agactcaacc 180
164 gttcctccgc tctacaggtc ctccctggctc accccgaaca tggtggacgg cctgaagatg 240
165 gaggagaact ttcaaagtgc gattgagacc tccgcatctt tctcctcttt gctgggcaga 300
166 gcggtgagcc ccaagtctgt ctgcgagggc tgtcagcggg tcatctcgga caggtttctg 360
167 ctgcggtca acgacagctt ctggcacgag caatgcgtgc agtgtgcctc ctgcaaagag 420
168 cccctggaga ccactgctt ctaccgggac aagaagctct actgcaagta ccactacgag 480
169 aaactgtttg ctgtcaaagt tgggggctgc ttcgaggcca ttgcgccc aa tgagtttgtc 540
170 atgctgccc agaagagcgt ataccacctg agctgcttct gctgctgcgt ctgtgagcga 600
171 cagctgcaga agggtgacga gtttgctctg aaggagggcc agctgctctg caaaggggac 660
172 tatgagaaag aacgggagct gctgagcctg gtgagccctg cggcctcaga ctcaggcaaa 720
173 agcgtatgat aggagagcct ttgcaagtca gcccatgggg caggaaaagg agcatcagag 780
174 gacggcaagg accataagcg acccaaactg ccagaacca tcctgaccac tcagcagagg 840
175 agagcattca aggctctggt tgaagtatcc tccaagccct gcagaaaggt gagggagact 900
176 ctggctgcgg agacagggct gagtgtccgt gtggttcagg tgtggttcca gaaccagcga 960
177 gccaatga agaagctggc ccggcgacag cagcaacagc aacaggacca acagaacacc 1020
178 cagaggctga cttctgctca gacaaatggt agtgggaatg cgggcatgga agggatcatg 1080
179 aaccctata caacgttgcc caccacacag cagctgctgg ccattgaaca gagcgtctac 1140
180 aactctgatc ccttccgaca gggctctacc ccacccaga tgcctggaga tcacatgcac 1200
181 ccctatggtg ctgaacctct ttccatgac ttggatagt atgacacatc tctcagtaac 1260
182 ctgggagact gcttctggc aacctcagaa gctgggcccc tgcagtccag agtgggaaac 1320
183 cccattgacc atctgtactc catgcagaat tcctatttca cctcttgagt cttctcctac 1380
184 aattttgtga cctgggctcc catatggaac aaccatactg tgtgaagggt tgctgacttt 1440
185 aggatgggga ggccagagaa gaggtgggct ggggagggag gtttgttggg gatgctgttg 1500
186 ttaattata tgggtgagct cagcatttcc aaagactgaa tacattatgg attgcatagt 1560
187 ttaatgtttc taataagagt cttagtgtta gatatgaaga tgtgtttatc attaagggca 1620

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188 ggggtctttta atatagacat tctcaagcaa actagatatc tagggactcc taacagcttc 1680
189 ccaccgttct ggagaagtgc ttgtcaagag gtgccgtatg tctattcatc tacacaccaa 1740
190 tagacagaca gatttgtgtg ttgtgtgtgtg ttgtgtgtgtg ttgtgtgtgtg ttgtatgagt 1800
191 tgtgtaaaac ctttcatact ttatcatcaa agttttattcc taattataac agacaccaac 1860
192 tgtacagcaa aagtaacttt attttcagtgt tgaactatat ttaaggaaat gcttgatgca 1920
193 cttaagttat aaaatgagat aattttacttt tataaacttt attttttagtt tggagagact 1980
194 catcggcagg gcagagagaa ctgttccacc gggccccaca gctctgagtgt cttgagttca 2040
195 ctctgtgatc agagcatcat tgaggtctag aatacaactc cagatggcag gcagcatgct 2100
196 atagtgaact catgctcacc ctggtgtcca gtcactgggc ctgaatgaga ttttaggctt 2160
197 attggcatgg gattgttggg cagcatcagc aagggtgtcc ttacccccac cccaccccca 2220
198 gattcagcct cgatgagtgt ggatgaagtt gatagccaca cctacctctc tctctatgag 2280
199 tgtggatgag gtggttgcca cacctacctc cctggggaca ataaggctcc ataccaggac 2340
200 atgatcgaag ttgaaactaa aataaatctg atatgattta aaatataacc gagtcatgta 2400
201 cctgatgata gaggatacct gggaccacag agcaggaagt tctggtacct taagtcctat 2460
202 ctctctgcat agcccatatg gccacatgac agagacacag ctctgagggg gtggagacta 2520
203 cgctccatct gagaagggtg aagaggcgtg gtggatggaa ttctagaaca agtggtgact 2580
204 tgcacatctg ttgttttttt ttttggtttt gtttggtttt gttcttactt tttaaaaagt 2640
205 cacttcaacg tgactgtatg ccccccaaaa agccggaatt acttgtgatc tctgtttgtc 2700
206 tctttcttga gggcccataa tctgggggcc tgctcataaa cagcctcatg gagttcatag 2760
207 aagcagaggg gaccaggcag gtaccagggt ctcttccctc caactcatgt tgcagtcctt 2820
208 gagcacagga agaccagta gccattgtac acagggacaa tcccggtgcc tgaactccat 2880
209 tgtatacagg gacagttcca tgccctgatc tccaattacg gtgctagagt gggatcttct 2940
210 gtgttaggat ccttctgggg aagcagaatg agtgtagggg gaagaaagaa gggctccagt 3000
211 gagaggggct gtgacaggca tgacgtcatg cccgggacca tcatcagagc catgactatg 3060
212 cccacatatc cacttcattc tctttaaggc cagaggaagc atgtccctta gtggtagagt 3120
213 gtgtgttgtg tgatttttgt gctcttcttt ataatttata caaacctga gaaacctga 3180
214 accagtctgt gggctgagaa tgaggcgggt gtagggggca cagacagtgt ctgtgtggct 3240
215 gattggttga ggaatgtagc agatatgtga atgaaagcaa acagagatcc ttaattctac 3300
216 tctctaata gaataccgaga tgaaattaaa agcctctt 3338

```

218 &lt;210&gt; SEQ ID NO: 14

219 &lt;211&gt; LENGTH: 382

220 &lt;212&gt; TYPE: PRT

221 &lt;213&gt; ORGANISM: Mus musculus

223 &lt;400&gt; SEQUENCE: 14

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224 Met Leu Asp Gly Leu Lys Met Glu Glu Asn Phe Gln Ser Ala Ile Glu
225 1 5 10 15
226 Thr Ser Ala Ser Phe Ser Ser Leu Leu Gly Arg Ala Val Ser Pro Lys
227 20 25 30
228 Ser Val Cys Glu Gly Cys Gln Arg Val Ile Ser Asp Arg Phe Leu Leu
229 35 40 45
230 Arg Leu Asn Asp Ser Phe Trp His Glu Gln Cys Val Gln Cys Ala Ser
231 50 55 60
232 Cys Lys Glu Pro Leu Glu Thr Thr Cys Phe Tyr Arg Asp Lys Lys Leu
233 65 70 75 80
234 Tyr Cys Lys Tyr His Tyr Glu Lys Leu Phe Ala Val Lys Cys Gly Gly
235 85 90 95
236 Cys Phe Glu Ala Ile Ala Pro Asn Glu Phe Val Met Arg Ala Gln Lys
237 100 105 110
238 Ser Val Tyr His Leu Ser Cys Phe Cys Cys Cys Val Cys Glu Arg Gln

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239          115          120          125
240 Leu Gln Lys Gly Asp Glu Phe Val Leu Lys Glu Gly Gln Leu Leu Cys
241          130          135          140
242 Lys Gly Asp Tyr Glu Lys Glu Arg Glu Leu Leu Ser Leu Val Ser Pro
243 145          150          155          160
244 Ala Ala Ser Asp Ser Gly Lys Ser Asp Asp Glu Glu Ser Leu Cys Lys
245          165          170          175
246 Ser Ala His Gly Ala Gly Lys Gly Ala Ser Glu Asp Gly Lys Asp His
247          180          185          190
248 Lys Arg Pro Lys Arg Pro Arg Thr Ile Leu Thr Thr Gln Gln Arg Arg
249          195          200          205
250 Ala Phe Lys Ala Ser Phe Glu Val Ser Ser Lys Pro Cys Arg Lys Val
251          210          215          220
252 Arg Glu Thr Leu Ala Ala Glu Thr Gly Leu Ser Val Arg Val Val Gln
253 225          230          235          240
254 Val Trp Phe Gln Asn Gln Arg Ala Lys Met Lys Lys Leu Ala Arg Arg
255          245          250          255
256 Gln Gln Gln Gln Gln Gln Asp Gln Gln Asn Thr Gln Arg Leu Thr Ser
257          260          265          270
258 Ala Gln Thr Asn Gly Ser Gly Asn Ala Gly Met Glu Gly Ile Met Asn
259          275          280          285
260 Pro Tyr Thr Thr Leu Pro Thr Pro Gln Gln Leu Leu Ala Ile Glu Gln
261          290          295          300
262 Ser Val Tyr Asn Ser Asp Pro Phe Arg Gln Gly Leu Thr Pro Pro Gln
263 305          310          315          320
264 Met Pro Gly Asp His Met His Pro Tyr Gly Ala Glu Pro Leu Phe His
265          325          330          335
266 Asp Leu Asp Ser Asp Asp Thr Ser Leu Ser Asn Leu Gly Asp Cys Phe
267          340          345          350
268 Leu Ala Thr Ser Glu Ala Gly Pro Leu Gln Ser Arg Val Gly Asn Pro
269          355          360          365
270 Ile Asp His Leu Tyr Ser Met Gln Asn Ser Tyr Phe Thr Ser
271          370          375          380
274 <210> SEQ ID NO: 15
275 <211> LENGTH: 1562
276 <212> TYPE: DNA
277 <213> ORGANISM: Homo sapiens
279 <400> SEQUENCE: 15
280 gtgaaatcag atcagccaga gcagttcgct gtgactgac tctcctccca ccctacattc 60
281 tcttggtgctg accctatcct cctggctgat tctggctgcc ctggacactc cctcagttct 120
282 ttcccaggag tgcggtggct gctggcgccg agtcccagcg ggcacggacg tcagacgcat 180
283 cgtttcttct cctctacagg tcctcccggc ccggcccga catgctggac ggcctaaaga 240
284 tggaggagaa cttccaaagc gcgatcgaca cctcggcctc cttctcctcg ctgctgggca 300
285 gagcggtagc cccaagtct gtctgcgagg gctgtcagcg ggcatcttg gacaggtttc 360
286 tgctgcggct caacgacagc ttctggcatg agcagtgcgt gcagtgcgcc tctgcaaag 420
287 agccctgga gaccacctgc ttctaccggg acaagaagct gtactgcaag tatgactacg 480
288 agaagctgtt tgctgttaaa tgtgggggct gcttcgaggc catcgctccc aatgagtttg 540
289 ttatgcgggc ccagaagagt gtataccacc tgagctgctt ctgctgctgt gtctgcgagc 600
290 gacagcttca gaagggtgat gagtttgtcc tgaaggagg gcagctgctc tgcaaagggg 660

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**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/580,989

DATE: 06/19/2006

TIME: 11:18:04

Input Set : A:\082368-008100US.txt

Output Set: N:\CRF4\06192006\J580989.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date